FINAL ENVIRONMENTAL ASSESSMENT
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SANTA BARBARA COUNTY PARKS WATER SYSTEM UPGRADES AT LAKE CACHUMA CAMPGROUND
Appendix A Preliminary Project Designs Set 2
June 2010

0352_WSDS_P&P_P1-P7.dwg

PLOTTED: May 20, 2009 - 3:19pm

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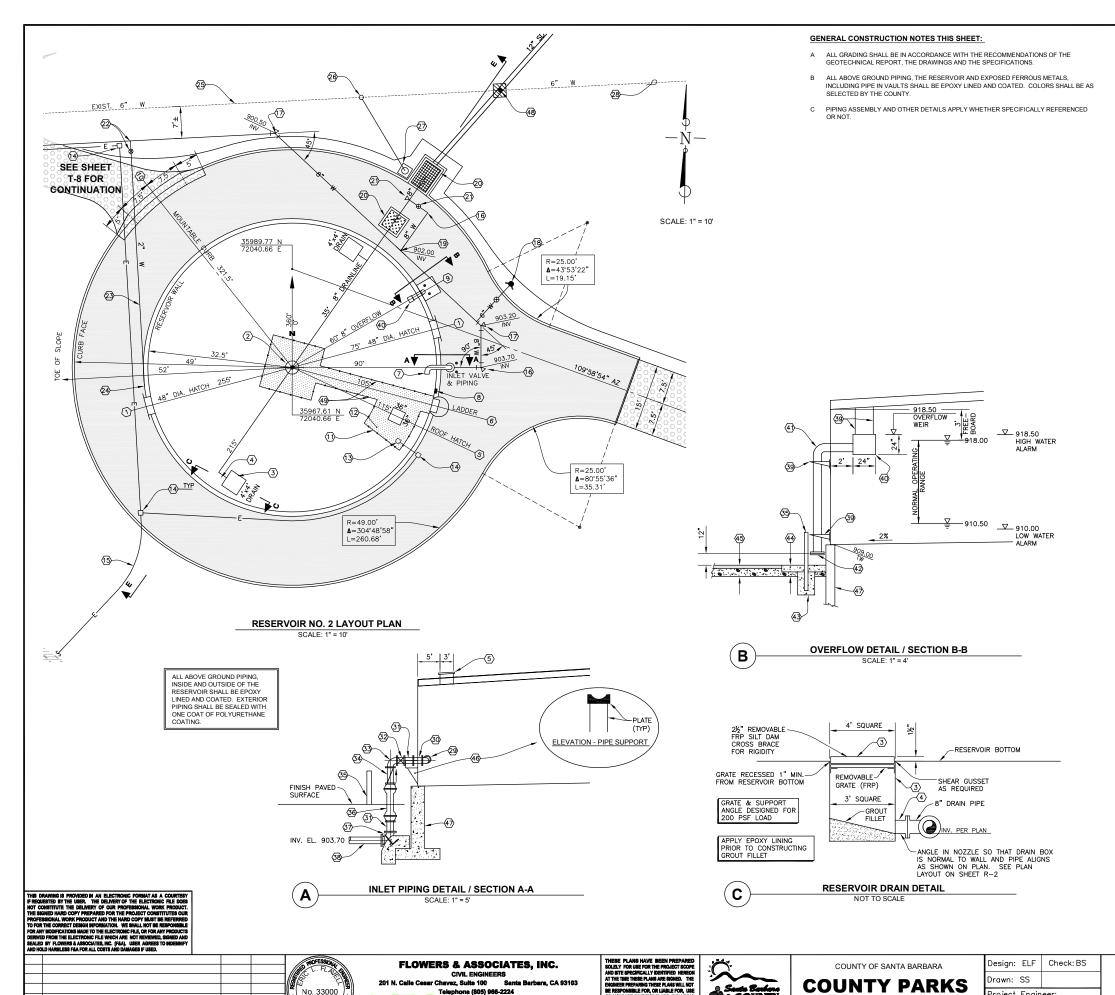
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COUNTY OF SANTA BARBARA, CALIFORNIA

PLOTTED: May 20, 2009 - 3:35pm

GENERAL CONSTRUCTION NOTES THIS SHEET:

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DATE: 5/20/09

No. 33000

REVISIONS

Exp.6-30-10

SPECIFIC CONSTRUCTION NOTES THIS SHEET:

- CONSTRUCT TWO 48" DIAMETER HINGED WATER TIGHT ACCESS HATCHES, WITH BOTTOM OF HATCH 12" ABOVE RESERVOIR BOTTOM
- SCREENED VENT STRUCTURE WITH HARNESS RING ON TOP. VENT STRUCTURE SHALL BE DESIGNED THE SUPPORT THE LOAD OF A PERSON WITH SAFETY HARNESS CONNECTED TO THE HARNESS RING. SCREEN SHALL BE BRONZE.
- 3 CONSTRUCT 4' X 4' STEEL DRAIN PER DETAIL C ON THIS SHEET (TYPICAL OF 2). ALIGN WITH WALL OF RESERVOIR.
- CONSTRUCT FABRICATED BEND OR ADJUST DRAIN NOZZLE ANGLE TO ACCOMMODATE DIFFERENCE BETWEEN DRAIN LINE 90 DEGREE BEND AND WALL OF DRAIN (TYPICAL OF 2).
- 5 CONSTRUCT 36" X 36" BILCO ROOF HATCH AND ACCESS LADDER WITH LADDER EXTENSION.
- 6 CONSTRUCT ACCESS LADDER WITH SAFETY CAGE AND HARNESS CONNECTOR
- 7 CONSTRUCT INLET PIPING PER DETAIL A ON THIS SHEET
- CONSTRUCT HALF HEIGHT WATER LEVEL INDICATOR. LOCATE WITHIN 12" OF LADDER SO THAT IT CAN BE ACCESSED BY HAND BY SOMEONE ON THE LADDER. CONFIRM LOCATION WITH COUNTY PRIOR TO INSTALLATION.
- 9 CONSTRUCT OVERFLOW PER DETAIL B ON THIS SHEET.
- 10 CONSTRUCT MOUNTABLE CURB PER LOCATION AND DIMENSIONS THIS SHEET AND AS CALLED FOR ON SHEET R-1.
- 11 CONSTRUCT STEEL GUARD RAIL CONFORMING TO ADA AND OSHA REQUIREMENTS. COAT WITH SAME COATING SYSTEM USED ON THE REST OF THE RESERVOIR.
- 13 J-BOX MOUNTED ON ROOF AND SIZED FOR LEVEL DETECTOR. SURFACE MOUNTED CONDUIT SHALL BE RIDGID AND SHALL BE PVC COATED OR COATED WITH THE COATING SYSTEM USED ON THE RESERVOIR. LEVEL DETECTOR SHALL BE COMPLETELY ACCESSIBLE FROM THE ROOF FOR SERVICING, REMOVAL AND REPLACEMENT.
- 14 JUNCTION BOX LOCATED AS REQUIRED AND AT 100' MAXIMUM SPACING. SEE DETAIL 20 ON SHEET CD-2.
- 15 CONDUIT TO EXISTING RESERVOIR, SEE SHEET T-8 FOR CONTINUATION. SEE DETAIL 20 ON SHEET CD-2 FOR INSTALLATION REQUIREMENTS.
- 16 CONSTRUCT 8" 90 DEGREE BEND (RMJ X RMJ) WITH THRUST BLOCK.
- 17 CONSTRUCT 8" 45 DEGREE BEND (RMJ X RMJ) WITH THRUST BLOCK
- 18 CONSTRUCT FIRE HYDRANT ASSEMBLY PER DETAIL 32 ON SHEET CD-3.
- 19 CONSTRUCT 8" TEE (RMJ X RMJ X RMJ) WITH THRUST BLOCK
- 20 CONSTRUCT VALVE VAULT, DRAINAGE INLET AND ASSOCIATED PIPING PER DETAIL D ON SHEET R-3 $\,$
- 21 CONSTRUCT 8" TEE (RMJ X RMJ X FLG) WITH THRUST BLOCK AND 8" GATE VALVE (FLG X RMJ).
- 22 CONSTRUCT 2" SADDLE CONNECTION AND 2" CORPORATION STOP PER DETAIL 31 ON SHEET CD-3.
- 23 CONSTRUCT 2" SCHD 40 PVC PIPELINE.
- CONNECT TO 2" PVC PIPE WITH 2" HARD COPPER FEMALE THREADED CONNECTOR, AND CONSTRUCT 90 DEGREE BEND AND RISER AND 2" HARD COPPER HEADER CONSISTING OF 2" ANGLE VALVE WITH HOSE CONNECTION AND 1" AND 3" HOSE BIBS. ALL COMPONENTS SHALL BE COPPER, BRASS OR BRONZE. COPPER PIPE AND PIPE SUPPORTS SHALL BE GALVANICALLY ISOLATED FROM THE RESERVOIR AND ALL FERROUS MATERIALS.
- 25 EXISTING CAMP WHITTIER WATER SUPPLY LINE. PROTECT IN PLACE
- 26 CONNECT 1" LINE TO TOP OF EXISTING 6" WATERLINE WITH SADDLE ADAPTORS AND FITTINGS AS REQUIRED AND EXTEND 1" PIPELINE TO ARV PER DETAIL 34 ON SHEET CD-3.
- 27 CONSTRUCT 1" ARV ASSEMBLY PER DETAIL 34 ON SHEET CD-3.
- 28 CONSTRUCT 1" ARV ASSEMBLY PER DETAIL 34 ON SHEET CD-3 AT LOCATION IDENTIFIED BY COUNTY. APPROXIMATE LOCATION SHOWN ON SHEET G-3.
- 29 CONSTRUCT 8" 90 DEGREE BEND (FLG X FLG), ROTATE 22.5 DEGREES UP
- 30 CONSTRUCT 8" NIPPLE WALL PENETRATION (FLG X FLG)
- 31 CONSTRUCT 8" NIPPLE (FLG X FLG) LENGTH AS REQUIRED.
- 32 CONSTRUCT 8" GATE VALVE, ROTATE 90 DEGREES SO HAND WHEEL STEM IS PARALLEL WITH FINISH GRADE.
- 33 CONSTRUCT 8" 90 DEGREE BEND (FLG X FLG)
- 34 CONSTRUCT LOW HEAD CHECK VALVE WITH "HOLD OPEN". ACCESS PLATE SHOULD BE FACING AWAY FROM RESERVOIR WALL.
- 35 CONSTRUCT GUARD POST PER DETAIL 8 ON SHEET CD-1 (TYPICAL).
- 36 CONSTRUCT FLEXIBLE EXPANSION JOINT (FLG X FLG
- 37 CONSTRUCT 8" 90 DEGREE BEND (FLG X RMJ) WITH TIED DOWN THRUST BLOCK MODIFIED TO
- 38 CONSTRUCT ONE JOINT OF CLASS 53 DUCTILE IRON PIPE AND TRANSITION TO CLASS 200 PVC PIPE.
- 39 CONSTRUCT HANGERS AND SUPPORTS AS REQUIRED FOR THE OVERFLOW ASSEMBLY
- 40 CONSTRUCT MINIMUM 2' X 2' OVERFLOW BOX AND EPOXY LINE AND COAT
- GRADE. OVERFLOW ASSEMBLY SHALL BE EPOXY LINED AND COATED.
- 42 CONSTRUCT FLANGE END AND CUT ~8" DIAMETER OPEN TO MATCH THE I.D. OF THE PIPE. CONSTRUCT STAINLESS STEEL SCREEN WITH ½" OPENINGS THAT IS SANDWICHED BETWEEN THE
- 43 CONSTRUCT CONCRETE BASE, RECESS TOP OF CONCRETE BASE TO ACCOMMODATE CONCRETE SPLASH PAD.
- 44 CONSTRUCT SPLASH PAD OF 8" THICK CONCRETE WITH 4-#4 BARS ON 4" OF AGGREGATE BASE.
- 45 CONSTRUCT A.C. PAVEMENT STRUCTURAL SECTION PER DETAIL 2 ON SHEET CD-1
- 46 WELDED STEEL 1/4" PLATE PIPE SUPPORT BRACKE
- 47 CONSTRUCT CONCRETE RING WALL PER STRUCTURAL SHEET S-2.1
- 48 POTHOLE LOCATION OF EXISTING CONDUIT AND REPORT FINDINGS TO ENGINEER PRIOR TO
- 49 LIMITS OF NON-SKID SURFACE.

roject Engineer:

PLOTTED: May 20, 2009 - 3:35pm

610 Mission Canyon Road

Santa Barbara, CA 93105



LAKE CACHUMA WATER STORAGE AND DISTRIBUTION SYSTEM IMPROVEMENTS COUNTY OF SANTA BARBARA, CALIFORNIA

DATE: 5/20/09

Exp.6-30-10

DESCRIPTION

REVISIONS

5/20/2009 3:34:29 PM

1/Share\ShareCADD\ACADDWG\0352Design\DWG\0352_WSDS_R1-R4.dwg, R-3 ResSections pdf, lebeam PDF9 Printer HighRes.pc3, ANSI_B_(11.00_x_17.00_Inches), 1.2.16055

GENERAL CONSTRUCTION NOTES THIS SHEET:

- A ALL ABOVE GROLIND PIPING THE RESERVOIR AND EXPOSED FERROLIS METALS. INCLUDING PIPE IN VAULTS SHALL BE EPOXY LINED AND COATED. COLORS SHALL BE AS SELECTED BY THE COUNTY.
- B. PIPING ASSEMBLY AND OTHER DETAILS APPLY WHETHER SPECIFICALLY REFERENCED

SPECIFIC CONSTRUCTION NOTES THIS SHEET:

- CONSTRUCT SLEEVE FOR 8" DRAIN LINE THROUGH RING WALL
- 2 CONSTRUCT DRAIN LINE FROM DRAINAGE SUMPS OF 8" DIP. TERMINATE IN PLAIN END
- 3 CONSTRUCT RESERVOIR FOUNDATION, SEE SHEET S-2.1.
- 4 CONSTRUCT FLEX COUPLER
- 5 CONSTRUCT DIP NIPPLE (PE X PE)
- 6 CONSTRUCT DIP NIPPLE (FLG X PE).
- 7 CONSTRUCT GATE VALVE (FLG X FLG) WITH 2" NUT OPERATOR
- 8 CONSTRUCT LOW HEAD CHECK VALVE WITH "HOLD OPEN".
- 9 CONSTRUCT 4' X 4' PRECAST VAULT. SET VAULT TO MATCH SLOPE OF ROAD AS CALLED FOR ON GRADING PLAN SHEET R-1.
- 10 TRAFFIC RATED ALUMINUM, SPRING LOADED, HINGED, LOCKING COVER.
- 11 GROUT DRAIN KNOCK-OUT FLUSH WITH BOTTOM OF VAULT.
- 12 CORE HOLE FOR DRAIN LINE AND CAULK ANNULAR SPACE
- 13 CONSTRUCT 2" PVC DRAIN LINE AND CAULK ANNULAR SPACE OF WALL PENETRATIONS.
- 14 CONSTRUCT 2" THREADED PVC CHECK VAI VE
- 15 CONSTRUCT 8" DIP TEE (RMJ X RMJ X FLG) AND THRUST BLOCK.
- 16 CONSTRUCT CUSTOM MADE 8" ENERGY DISSIPATER (FLG X FLG) WITH 5 1" WIDE SLOTS.
- 18 CONSTRUCT GALVANIZED GRATE FRAME PER CALTRANS D77A
- 19 CONSTRUCT FABRICATED WELDED AND GALVANIZED GRATE PER CALTRANS STANDARD PLAN D77A, TYPE 18-9X AND 24-12X GRATE, MODIFIED TO THE DIMENSIONS SHOWN ON THE PLANS. GRATING SHALL BE CUT INTO SECTIONS NOT TO EXCEED 30 LBS.
- 20 CUT AND BAND OPENING LOCATED OVER THE VALVE AND SIZED TO ALLOW ACCESS OF 2" NUT WRENCH WITHOUT REMOVING THE GRATE.
- 21 CONSTRUCT 6" AGGREGATE BASE UNDER ALL STRUCTURES (TYPICAL
- 22 REMOVE SOIL A MINIMUM OF 2' BELOW ALL PROPOSED IMPROVEMENTS AND EXTENDING A MINIMUM OF 5' BEYOND. SCARIFY AND MOISTURE CONDITION SUBGRADE AND COMPACT TO MINIMUM OF 95% OF MAXIMUM DENSITY. CLEAN, CONDITION AND REPLACE REMOVED SOIL AND COMPACT TO MINIMUM OF 95% OF MAXIMUM DENSITY.
- 23 CONSTRUCT 12" HDPE STORM DRAIN WITH INTEGRAL WEEP RING.
- 24 CONSTRUCT A.C. PAVEMENT STRUCTURAL SECTION PER DETAIL 2 ON SHEET CD-1.
- 25 SLOPE EXCAVATION FROM ONE ELEVATION TO THE NEXT AT 1H:1V. BENCH FILL A MINIMUM OF 2' INTO SLOPE AS FILL IS PLACED (TYP).
- 26 CONSTRUCT FILL SLOPE AT MAXIMUM OF 3H:1V SLOPE OR FLATTER. FINISH SLOPE SHOULD BE CONTOUR GRADED FOR A NATURAL APPEARANCE.
- 27 REMOVE 12" OF TOP SOIL AND STOCK PILE FOR REUSE AS SURFACE SOIL ON FINISH GRADE. COMPACT MOISTURE CONDITION AND COMPACT SUBGRADE TO MINIMUM OF 90% OF MAXIMUM DENSITY. CONSTRUCT KEY AT BASE OF SLOPE AND BENCH INTO SLOPE, PER DETAIL 1 ON SHEET CD-1.
- 28 CONSTRUCT EXCESS SOIL DISPOSAL FILL TO THE APPROXIMATE LIMITS SHOWN IN PLAN ON SHEET R-2.
- 29 CONSTRUCT 6 FOOT HIGH PVC COATED FENCE WITH 1" MESH OPENING AND THREE STRAND BARBED WIRE ON TOP. FENCING SHALL INCLUDE TOP AND BOTTOM RAIL AND ALL COMPONENTS SHALL BE PVC COATED. FENCE SHALL BE CONSTRUCTED IN ACCORDANCE WITH CALTRANS STANDARD PLAN A65.
- 30 CONSTRUCT VAULT, CATCH BASIN AND PIPE ASSEMBLY PER DETAIL D THIS SHEET.
- 31 OVEREXCAVATION SHALL BE MINIMUM 5' BELOW EXISTING GRADE AND 2' BELOW THE BOTTOM OF THE RING WALL FOUNDATION, AND EXTEND A MINIMUM OF 5' BEYOND THE PERIMETER OF THE RING WALL. CONFIRM PLAN ELEVATION CONFORMS TO THIS CRITERIA
- 32 SEE SHEET S-4.2 FOR RESERVOIR FOUNDATION MATERIAL
- 33 CONSTRUCT 8" DIP DRAIN LINE
- 34 CONSTRUCT RESERVOIR PER PLAN AND DETAILS ON SHEET R-2
- 35 CONSTRUCT CONCRETE CURB PER PLAN LAYOUT ON SHEET R-1, R-2 AND DETAIL 3 ON SHEET CD-1.
- 36 CONSTRUCT CUT SLOPE AT MAXIMUM 3H:1V AND CONTOUR GRADE FOR SMOOTH NATURAL APPEARANCE. NO EXCAVATION WORK SHALL BE WITHIN 20' OF THE EXISTING RESERVOIR.
- 37 PROTECT EXISTING FENCE.
- 38 EXISTING RESERVOIR, PROTECT IN PLACE. SEE SHEET R-4 FOR MODIFICATION TO EXISTING RESERVOIR.
- 39 REMOVE EXITING ROOF STRUCTURE AND CONSTRUCT NEW ROOF STRUCTURE AND WALK WAY PER DETAILS ON SHEET S-4.1.
- 40 CONSTRUCT INLET / OUTLET PIPING MODIFICATIONS PER DETAILS ON SHEET R-4.
- 41 BLOCK OUT FOOTING AS REQUIRED FOR INSTALLATION OF FLEX COUPLING. SUBMIT PROPOSED MODIFICATIONS TO ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.
- 42 CONSTRUCT RESERVOIR DRAIN / INLET PER STRUCTURAL DRAWINGS SHEET S-4.2.
- 43 CONSTRUCT 12 VOLT LIGHTING SYSTEM WITH 5-10 WATT LIGHTS. LIGHTS SHALL BE SET 7' ABOVE WALKWAY.
- 44 CONSTRUCT SOLAR PANEL AND BATTERY PACK SIZED FOR 5-100 WATT BULBS FOR 8 HOURS CONTINUOUS USE.
- 45 CONSTRUCT WALKWAY AND HANDRAIL PER STRUCTURAL DETAILS ON SHEET S-4.1.



R-3

COUNTY OF SANTA BARBARA, CALIFORNIA

roject Engineer:

Date:

610 Mission Canyon Road

Santa Barbara, CA 93105

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DISTRIBUTION SYSTEM IMPROVEMENTS

1/Share/ShareCADD/ACADDWG\0352Design\DWG\0352 WSDS_R1-R4.dwg, R-4 ExResPipingMods ebeam PDF9 Printer HighRes, pc3, ANSL B (11.00 x 17.00 Inches), 11.2.16055

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